Serial Number: 10/414,455 Group Art Unit: 2859

Attorney Docket No. 49991-60011CON

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An isolated cyclic ether vitamin D3 compound having the formula (I) as follows:

, wherein A₁, A₂ and A₃ are a single or a double bond; X, R₁, R₂, R₃, R₄ and R₅ are selected from the group consisting of a hydrogen, a halogen, a haloglkyl, a hydroxy, a hydroxy-protecting group, an alkyl, an alkenyl, an alkynyl, an alkoxy, an aryl group and a heterocyclic group.

2. (Original) An isolated 3-epi form of 1α -hydroxy-vitamin D3 compounds having the formula II as follows:

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, wherein A₁ is a single, a double, or a triple bond; A₂, A₃ and A4 are each independently selected from the group consisting of a single or a double bond; R₂, R₃, R₄, R₇, R₈ and R₉ are independently selected from the group consisting of a hydrogen, a deuterium, a deuteroalkyl, a hydroxy, an alkyl, an alkoxide, an O-acyl, a halogen, a haloalkyl, a hydroxyalkyl, an amine or a thiol group, and wherein the pairs of R₂ and R₃, and R₄ and R₇ taken together are an oxygen atom; and R₅ and R₆ are independently selected from the group consisting of a hydrogen, a deuterium, a halogen, an alkyl, a hydroxyalkyl, a haloalkyl, and a deuteroalkyl.

- 3. (Original) The compound of claim 2, which is $1\alpha(OH)$ vitamin D3, $1\alpha,24$ dihydroxy 3-epi vitamin D3, 1α hydroxy 24-ethyl 3-epi vitamin D3, 1α hydroxy 24-methyl 3-epi vitamin D3, or 1α , 24-dihydroxy 24-methyl 3-epi vitamin D3.
- 4. (Currently Amended) A method of treating a disorder characterized by an aberrant activity of a vitamin D₃-responsive cell, comprising administering to a subject an effective amount of a vitamin D₃ compound having the formula (I) or (II) of any one of claim[s] 1 or 2, such that the aberrant activity of the vitamin D₃-responsive cell is reduced.
- 5. (Original) The method of claim 4, wherein the disorder comprises an aberrant activity of a hyperproliferative skin cell.
- 6. (Original) The method of claim 4, wherein the disorder comprises an aberrant activity of an endocrine cell.
- 7. (Original) The method of claim 6, wherein the endocrine cell is a parathyroid cell and the aberrant activity is processing and/or secretion of parathyroid hormone.
- 8. (Original) The method of claim 7, wherein the disorder is secondary hyperparathyroidism.
- 9. (Original) The method of claim 8, wherein the disorder comprises an aberrant activity of a bone cell.
- 10. (Original) The method of claim 9, wherein the disorder is selected from the group consisting of osteoporosis, osteodystrophy, senile osteoporosis, osteomalacia, rickets, osteitis fibrosa cystica, renal osteodystrophy, secondary hyperparathyrodism, cirrhosis, and chronic renal disease.
- 11. (Original) The method of claim 4, wherein the subject is a mammal.
- 12. (Original) The method of claim 11, wherein the mammal is a human.

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13. (Original) A method of ameliorating a deregulation of calcium and phosphate metabolism, comprising administering to a subject a therapeutically effective amount of a 3-epi vitamin D₃ compound of any of claim[s] 2 or 3, so as to ameliorate the deregulation of the calcium and phosphate metabolism.

- 14. (Original) The method of claim 13, wherein the deregulation of the calcium and phosphate metabolism leads to osteoporosis.
- 15. (Currently Amended) A pharmaceutical composition comprising, a therapeutically effective amount of a vitamin D₃ compound of any one of claim[s] 1 or 2, and a pharmaceutically acceptable carrier.
- 16. (Original) The composition of claim 15, which is suitable for topical or oral administration.
- 17. (Currently Amended) A packaged compound, comprising a vitamin D₃ compound of any one of claim[s] 1 or 2, packaged with instructions for use of the compound for treating a disorder characterized by an aberrant activity of a vitamin D₃-responsive cell.